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Serical Dyeing

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*Ad utilitatem vita munia concilia
factaque nostra dirigenda sunt.
Facites.*

Wm Barnwell

Mrs Daniel do do M.B.H.

admitted March 21st 1822

April 21st

The weather was very
fine and the water was
very calm.

Mr. Brown

March 21st 1852

A few observations
on
Tropical Dysentery

Respectfully submitted to the
Medical professors
of the
University of Pennsylvania

by a Student of Medicine

The subject which I have chosen for the present occasion, is one on which so much has already been said by able and ingenious writers, that nothing new can be expected from me. The healing art however is one of those sciences, the improvement of which is daily demonstrated, both in theory and in practice, and as the eloquent Rush has expressed it. "Offers to the youthful mind every thing as new, whilst to physicians engaged in practice, or advanced in life, society prevents apathy in study and practice; and to both; the objects of knowledge, and the subjects of inquiry are inexhaustible; and of course unequal in duration to the age of man. *

Notwithstanding the labours of

* Introductory Lectures page 225.

of Medical men, for the elucidation of difficult and obscure points connected with the science of medicine, and admitting as we must, the immense improvements of later years, yet its imperfections too evidently demonstrate there is yet much left to exercise the talents and ingenuity of medical practitioners, — and us (Students) who have not as yet acquired that quickness of perception, and soundness of judgment; without which we are unable fully to comprehend the nature of disease, must be indefatigable in our inquiries — and such exertions as tend to alleviate the anguish of disease; and to lighten the weight of human misery, cannot fail to be laudable.

I am convinced that few of us are aware of ^{the} immense responsibility we undertake when we engage in the study of medicine. For assuredly if any study demands steady and

steady and unswerving zeal; that science which teaches us to contend with the multiplied maladies that spoil our species deserve to rank amongst the most respectable. And such feelings as excite individuals, independently of their professional obligations, to devote their time and talents to the common interest have ever been considered as the most honourable.

Previously to entering on the disease it may be proper to take a short view of the general effects resulting from changing a temperate for a tropical climate. Amongst the inhabitants of more temperate and colder regions the natural constitution is that of muscular irritability and promptitude to action the nervous mobility is not so great; the influence of that power being more steady, equal

equal & and moderate.

In a cold climate the solids are denser, the blood contains a greater proportion of crassamentum and the circulating mass we have reason to believe is in greater proportion, the cuticular discharge and bilious secretion are in ~~(greater proportion)~~ smaller quantity: the use of animal food and fermented liquors is more indulged in, and with greater impunity.

The change from a cold to a hot climate, gives rise to effects upon the frame, which might be expected from a constant, and powerful influence acting upon an accumulated excitability, which hitherto had been obedient to the impression of a less powerful stimulus; hence the circulation is increased and hurried, the respiration more frequent; lassitude and languor are felt; with insensibility to the

to the customary employment, or exertions, the susceptibility to various impressions augmented; the disposition becomes more irritable, and with the exception of the urine, all the secretions become augmented: the cutaneous and biliary peculiarly so: and the latter from its effects on the intestinal canal, we have every reason to believe is peculiarly excited. giving rise to the disease under consideration, and which has assumed different names by writers, as Bilious Flux, Hepatic derangement &c.

The impression being stronger: the action of the visceræ of the system and skin being greater than in due proportion to the strength of the vital powers: or to the degree in which the muscular irritability is removed by the action of the system: the

the effect is relaxation; and a weakened performance of the functions: hence nervous irritability increases — and where these effects are aided by the abuse of spirituous liquors; this irritability of frame increases to a great degree, extending even to the mind itself.*

"Whilst muscular action is by repetition strengthened and more readily performed; that of the organs of sense, or power of receiving sensual impressions, is, by the same means diminished. The pleasurable feelings of intoxication as produced by the application of the liquor to the nerves of the organs of taste, by the increased

* In few situations is this better illustrated than on board vessels of war, where the contrast between the absolute and temperate is peculiarly striking, not only as regards the capability of the latter to support vicissitudes, but

"increased actions and secretions of the vessels of
the viscera; or by those perhaps of the sen-
sorium itself; become at length exhausted,
not to be again easily called forth. Hence
digestion becomes impaired; the appetite pre-
cocious; the gastric and hepatic secretions
irregular and vitiated in quality."

Such important functions involve
the others in their train, and the sensorium
participating in gives rise to bluntness
of perception and apathy, with occasional
violent emotions from the slightest causes.

Such then is a short sketch
of the changes likely to result from a short
residence in a warm climate. And to
individuals whose constitutions have not been
impaired by excess, or such effects untended
by pro-genitors; it is not improbable
such changes might be made without much

without much sacrifice of respectable existence
 by such persons as at the same time observe
 a due attention to regimen and exercise.

It is much to be regretted however that
 the great mass of those who resort to such
 climates, are from habit as well as circumstance
 wholly unprepared to encounter such
 changes. Hence the ravages of disease
 in these countries; or as more frequently
 described by a writer .. caused the shores
 of America to be peopled with the graves
 of the dead.

And amongst the
 foremost of those maledictions that have proven
 the scourge of foreigners in these climates was
 since the days of the adventurous Gama,
 may be placed Trop. Dysentery.

I know not whether it will be gen-
 -erally admitted that heat, or an increase

increase of temperature will be deemed indis-
 -pensable to the production of this disease,
 or be admitted as a proof of the hepatic
 system always participating in, and being
 in fact the primary seat of the disease, for
 it would indeed seem that nothing that could
 be taken into the alimentary canal as food
 or drink could have such a pernicious
 tendency.

That the Liver is capable of produ-
 -cing or secreting bile in such quantity as to
 give rise to all the grades of intestinal irita-
 -tion from the slightest tension to the severest
 form of dysentery, I am well convinced,
 and that if without participating in disease,
 is by its secretion capable of producing it
 in other parts. This is by no

no more a new idea; and is corroborated
 by what Saunders says page 164. The
 varied and increased action of a gland
 says he, has much influence in determin-
 ing the nature of the fluid secreted. In
 some cases bile is discharged of a green colour
 and extremely acid. In another place
 he says "The inhabitants of warm climates are
 extremely subject to diseases originating from
 increased secretion of bile; and the escape
 of its quantity in the prima via, which
 either by reabsorption into the "liver", pro-
 duces a general languor of the body, together
 with nausea, loss of appetite, foul tongue
 and indigestion; or being directed to the
 intestines; excites a painful diarrhoea, ul-
 timately tending to weaken their tone,
 and disturb their regular peristaltic motion.

Johnson the author on Tropical
 climates, and whose experience was

was ample, says "The increased and vitiated
 secretion of bile, debilitates and renders
 inevitable the whole tract of the alimentary canal.
 and in page 16 he says speaking of bile
 "On what this vitiation con-
 sists it is certainly not easy to say.
 "On high degrees of it, attendant on liver
 varied secretion both the colour and taste
 are surprisingly altered; since it occasion-
 ally assumes all the shades between a deep
 "bottle green, and a jet black; pap-
 er soaping at one time? an acidity that sets
 the teeth on edge; at other times,
 and indeed more frequently on acrimony
 which seems absolutely to corrode the sto-
 mach and fauces, as it passes off
 by vomiting; and when passing down-
 wards can be compared to nothing more
 appropriate than the sensation which one
 would expect from boiling lead passing

through the intuitions.

Many other proofs equally forcible might be added from intelligent authors who have observed for themselves and written on the spot, but having determined to confine myself to a few leading observations it will be unnecessary for me to enter more into detail and shall proceed first to notice the disease as it appears amongst foreigners and secondly to give in as concise a manner as practicable the leading indications in its treatment.

This disease has received different appellations from writers, as Hepatic and Biliary Flux, Putrid

Putrid Intestinal Remittent Fever
and of late with more propriety Ty-
phical Dysentery; and the latter
fever is evidently more appropriate in
as much as it is the consequence of
vitiated Bile: and treated by
appropriate remedies: differing materi-
ally from such as are recommended
for the treatment of this disease, as
it exists in colder or more temperate
regions.

The disease under consideration com-
menced with listlessness and languor, nausea,
and not infrequently vomiting of bile,
slight rigors, febrile heat, thirst,
and occasionally irritability of stomach,
ineffectual calls to go to stool, severe
tensions, flatulent distention of abdomen
a pulse small and quick, the waves

evacuations per anum consisting of frothy
mucus mixed with blood, & thick near
any scyala.

In the more
aggravated form of the disease the griping
and tenderness become excruciating, severe,
great prostration of strength, constant
calls to stool, and inability to evacuate
any thing, except perhaps a little blood-
ed mucus: lancinating pains over
the abdomen and pubis, dysuria, and
often a suppression of urine, accompa-
nied with an irritable stomach.

If these symptoms are not soon
relieved, there succeeds imbecility in
the intellectual functions, the pupil be-
comes dilated contracted, hiccup,
a languid scarcely perceptible pulse,
involuntary discharges, clammy sweats
and death at last puts a period to the
suffering. It is however

more commonly the case, that the disease is protracted to the chronic form, hence deaths in the acute stage are comparatively rare.

Such is the progress of the disease when uninterrupted by medicine, yet ^{when} these are interposed with due caution, the symptoms in a majority of cases gradually subside; and perhaps in few diseases is the remedial effect of medicine so unequivocal, as in a first attack of this disease, would I could say so of subsequent ones.

From the pain that exists about the Hypochondriac region one would be led to believe there invariably existed disease of the Liver, and when the colon is much diseased, as it always is in this complaint, we may form external exami-

external examinations frequently confound it with disease of the Liver; it vice versa.

I must confess I sank amongst those who were deceived by such examinations. I imagined the Liver in many cases not only diseased, but nearly covered by abscesses: yet in the post mortem examinations I was not a little surprised at being unable to detect any appearance of disease, though I made a minute search; cutting into every part. It is true I examined but four cases - of nineteen that died of this complaint, yet these were amongst the most protracted and genuine cases that occurred, of two hundred and seventy three patients.*

On examining the contents of the abdomen, the colon and rectum were

* Of 273 cases of this disease which occurred on board 249 were cured, 19 died, and 5 were sent to

were found to be the principal seat of disease. Their coats much thickened; with ulceration of the villous or internal coat, and the ^{large} intestines universally found lined with a dark coloured fluid; which on being removed demonstrated ulceration, and in many places absence of the internal coat, whilst in many others it was remarkably thickened, presenting a very uneven surface.

The diameter of the colon seemed in many places considerably diminished. This was particularly the case at the pect. arch, and in the Iliae regions where it is tied down by the peritoneum, and also in parts of the Sigmoid flexure; and when opened emitted a very offensive effluvia.

The principal structural derangement existed in the transverse arch of the colon; the Rectum next, and last of all the Small Intestines. Each

such disease of the colon will account for
the pain experienced in the Hypochondriac
region when pressure is not made externally.

The Stomach and Gall bladder present
nothing remarkable.

Nothing short of such examinations
could have convinced me: and indeed I
was convinced against my will; for I had
unhesitatingly pronounced previously to exami-
-nation that the Liver was diseased, and
dissection alone convinced me of my error.

We next proceed to the treatment,
which is very simple; and as laid down
by Johnson with one exception I believe
will be found applicable to most cases.

That part of the treatment laid down by

by him to which I object is bloodletting which should always be carefully avoided as should also that class of Cathartics which are denominated drastic.

We shall quote his own words in page 211 he says, "When the blood appears alarmingly in the stools; whether the fever run high or not Vincication may be employed without any apprehension of that heinous Debility."

Such an opinion from such high authority I consider of a dangerous tendency, it is however in a measure qualified by the ambiguity of the word alarmingly, which admits of much latitude. I am not a little at a loss to know what he means. To convey page 202 where he says, "In every case of the disease which has fallen under his observation; and the number he adds has

10 has not been inconsiderable; these functions
 10 have invariably been disordered from the very on-
 20 set; and soon seen other derangements in
 30 to their train; these were the functions of
 40 the Skin and Lungs &c. as perspiration
 50 and bilious secretion. And
 60 she calls upon any one to who has minutely
 70 regarded this disease at the bedside; to
 80 produce a single instance in which these
 90 functions were cured in in a natural
 100 manner; at any period of the disease.

What does this mean? certainly
 - by nothing; and is merely a statement of
 facts that must exist more or less in
 every disease; for does not disease imply
 a derangement of the functions?

But she returns to the testimony
 and here undoubtedly I pronounce this debi-
 lity to be no trifler as Johnson terms

turns it. . . to this conclusion I have been led from experience, having profited the failure of Johnson's operation or practice upon the same class of men. it is therefore with some confidence, I say so; a class too I grant of all others the most unfavorable for depletion of this nature* and I do not hesitate to say that whenever pursued such practice will be convinced of their injurious tendency. and will but too frequently induce a debility, from which it will be found difficult, if at all practicable to recover such as are subjected to it, for bleeding, even when there exists "tormina" pain and bloody evacuations, the symptoms which according to Johnson

*. The class alluded to are scummers of opulence of war. More temperate might have borne depletion better. But Johnson makes no exception; and such was the class amongst which he attended the disease.

warrant us in doing so. it is not calculated to promote a cure; or alleviate any one symptom. One of the principle indications in its treatment, is to support the strength of the patient; or in other words to remove the disease at as little waste of the constitutional vigor as practicable. And to accomplish this whatever may have been the discrepancy of medical men as to the origin of the disease; all have been unanimous in recommending Mercury for its cure. and the practice which I believe will be frequently found to succeed, will be to administer at the commencement of the disease; or as early as called on; from ten to twelve grains of Calomel; followed in a few hours by an ounce or two of Castor oil; whilst at the same time from fifteen grains ^{to 24} of Ipec. should be

should be put into about three ounces of
 water and allowed to infuse for eight or
 twelve hours; after which it may be given
 to the patient at once & followed by hot
 drinks of barley, rice water or gruel.
 These will generally produce several evacuations,
 after which the following formula, for
 which I am indebted to the Lectures of the
 present professor of the Theory and Prac-
 tice of Medicine for . . . com-
 posed of two grains of Calomel, one of
 Opium, and one half of Opium, given
 in the form either of a pill or powder
 and repeated every three or four hours,
 until the gums become slightly tender.
 an effect which will generally be produced
 in the course of twenty four or thirty
 six hours; and with an evident abate-
 -ment of all the symptoms. . . . At
 the expiration of this time it may be

be advisable to administer some mild aperient medicine; and this intention will be answered by a dose of Castor oil, or Magnesia. In this way we may give the formula already recommended, and the aperients alternately; until the disease be cured, or relieved; and in first attacks it will readily yield.

The indications to be constantly kept in view, are first to change or diminish the biliary secretion, secondly to keep the bowels open; and lastly not the least important to sheathe the irritated viscid coat of the intestinal canal.

To meet the first, the Colonic Spec. and opium will be found adequate, for the second the aperients already enumerated. and for the third and most difficult on board ship, the blandest aliment; as Sage, Popplea, Marsh-mallows

perado Chicken Soup &c and what will claim a decided preference when it can be procured, is mutton soup.

During the chronic stage of this complaint I have known a remarkable propensity for milk. and this even with those who during health were averse to it.

No benefit will be derived from the Nitric acid, from the Opie, in large quantity, or the cinchona either in substance or infusion.

Persons advanced in years, or whose constitutions have ~~not~~ been impaired by habits of intemperance, are peculiarly susceptible of this disease; and to such its ravages are principally confined; whereas when it attacks the temperate and abstemious, it is very much within the control of

of medicine, indeed it is a matter of surprise to patients labouring under the disease to find how soon every disagreeable symptom subsides on the slightest medicinal effort in a first attack; whereas during every succeeding one it becomes more difficult to remove, when it does not yield to the medicines enumerated; and becomes chronic, I know of nothing calculated to afford the shadow of hope; unless it be change of climate.

Tropical Dysentery may be said to be a disease which marks out its victims and pursues them with an unrelenting severity, attacking them again and again, until at length the constitution wears down by its violence, sinks.

The author is aware that in the

the treatment here recommended he has offered nothing new; he might have extended these observations to a much greater length by a relation of the unsuccessful application of numerous other means recommended by writers. he is convinced however that such a recital could prove of no manner of use; and would unnecessarily occupy the time of the gentleman who may do him the honour of its perusal, and unaided by the seducing embellishments of hypothetical reasoning, he has endeavoured in as concise a manner as the subject permitted to sketch out such means as he has known most useful, would he could add they had always been successful. But it is humiliating for us frequently to find our brightest prospects overcast; and the most approved means of cure occasionally ineffectual.

No medicine was ever found universally
 successful in any complaint - and it would
 be vain for us to recommend one possessing
 those qualities in Dysentery.

